

1/14

FIG.1

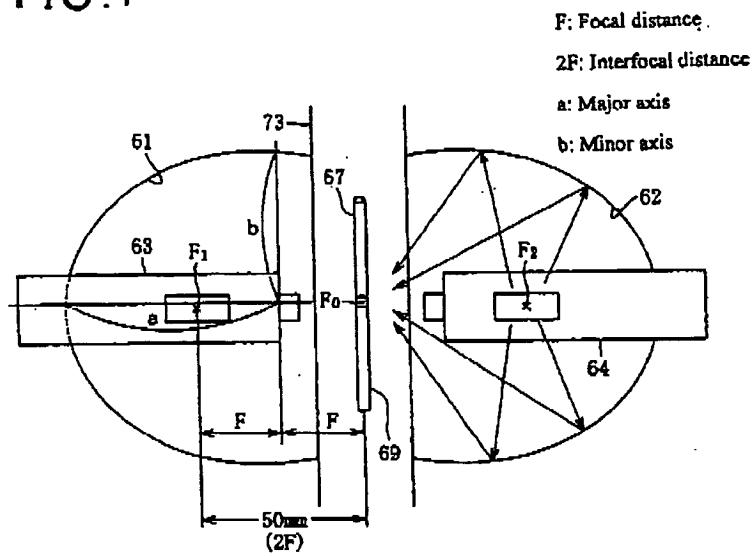
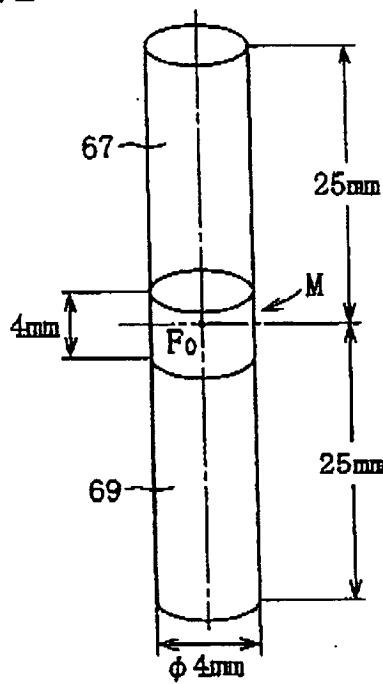


FIG.2



2 / 14

FIG.3

Mirror	S11	S2	S3	S8	S12	S13	S14	S15
Minor axis (a)	48.8	52	55	58.5	63.26	68.88	76.06	85.71
Major axis (b)	54.8	57.697	60.415	63.59	68.02	73.28	80.05	89.28
Focal distance (F)	25	25	25	25	25	25	25	25
Eccentricity ($e = F/b$)	0.48	0.43	0.41	0.39	0.37	0.34	0.31	0.28
Minor axis / major axis ratio	0.89	0.90	0.91	0.92	0.93	0.94	0.95	0.96
Quartz tube aperture diameter	70	70	70	70	70	70	70	70
Lamp aperture diameter	50	50	50	50	50	50	50	50

Cylindrical 650 W lamp (JCD 100V-650WC)

Melt zone power density	2.1	2.2	2.3	2.4	2.4	2.4	2.4	2.4
± 25 mm power	364.0	377.0	382.6	383.8	381.9	378.9	374.2	365.6

Plate 650 W lamp (JCS 100V-650WCC)

Melt zone power density	2.3	2.4	2.5	2.6	2.6	2.6	2.6	2.6
± 25 mm power	407.5	422.2	430.3	436.0	438.0	434.8	431.4	424.4

FIG.4

Melt zone average power density

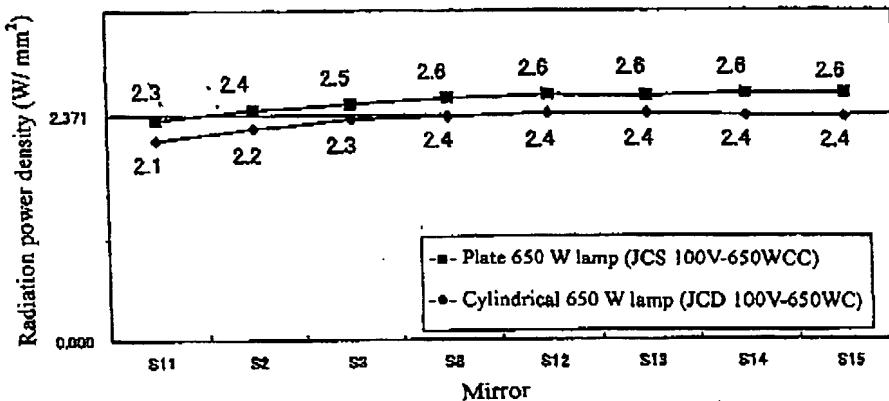


FIG.5

Radiation power at region ± 25 mm from focal point

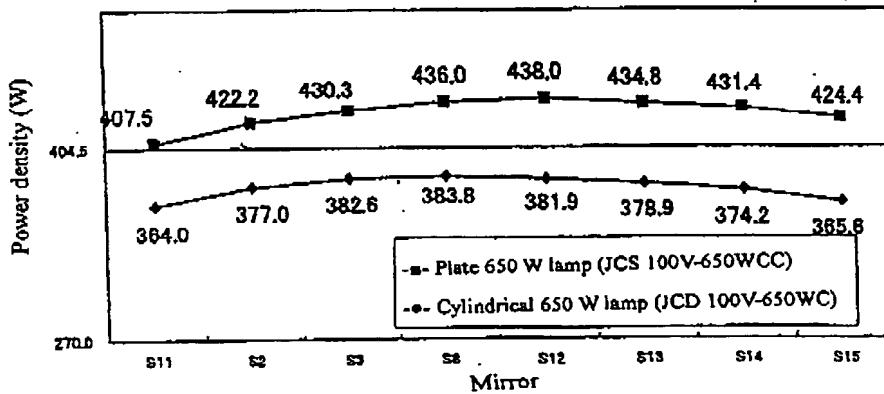


FIG.6

3 / 14

Mirror	S6	S7	S8	S9	S10	S16
Minor axis (a)	38.5	48.5	58.5	68.5	78.5	88.5
Major axis (b)	41.85	52.72	63.59	74.46	85.33	96.19
Focal distance (F)	16.41	20.67	25	29.19	33.45	37.69
Eccentricity ($e = F/b$)	0.39	0.39	0.39	0.39	0.39	0.39
Minor axis / major axis ratio	0.92	0.92	0.92	0.92	0.92	0.92
Quartz tube aperture diameter	70	70	70	70	70	70
Lamp aperture diameter	50	50	50	50	50	50

Plate 650 W lamp (JCS 100V-650WCC)

Melt zone power density	1.6	2.2	2.6	2.7	2.8	2.8
± 25 mm region radiation power	228.1	401.7	436.0	475.4	495.2	504.7

FIG.7

Melt zone power density

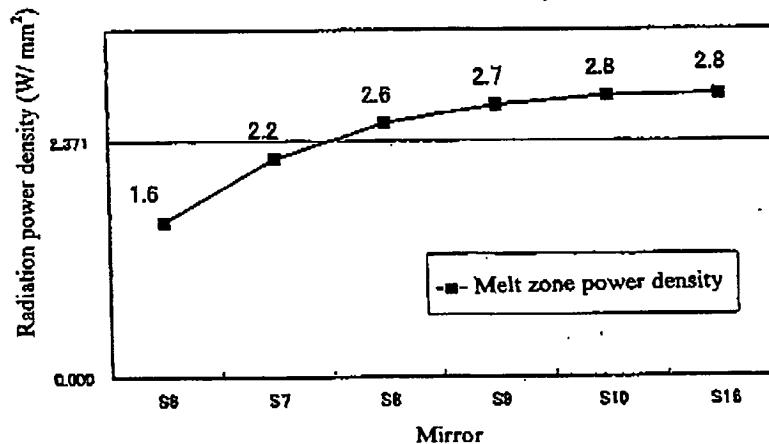
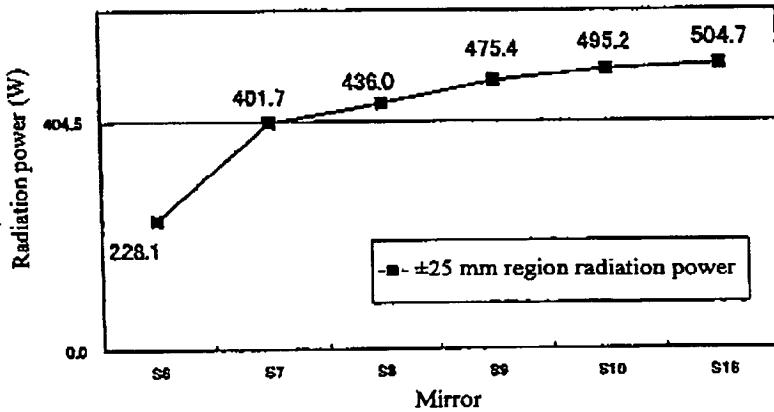


FIG.8

± 25 mm region radiation power



4 / 14

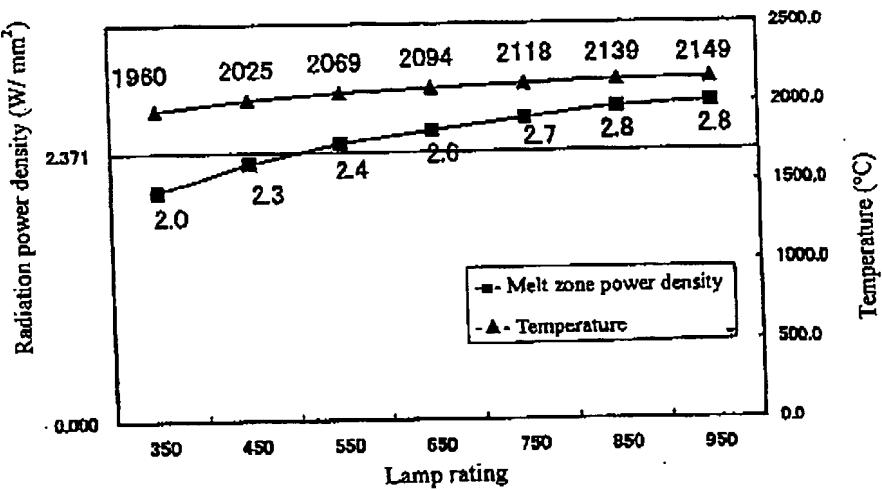
FIG.9

S8 mirror

Plate

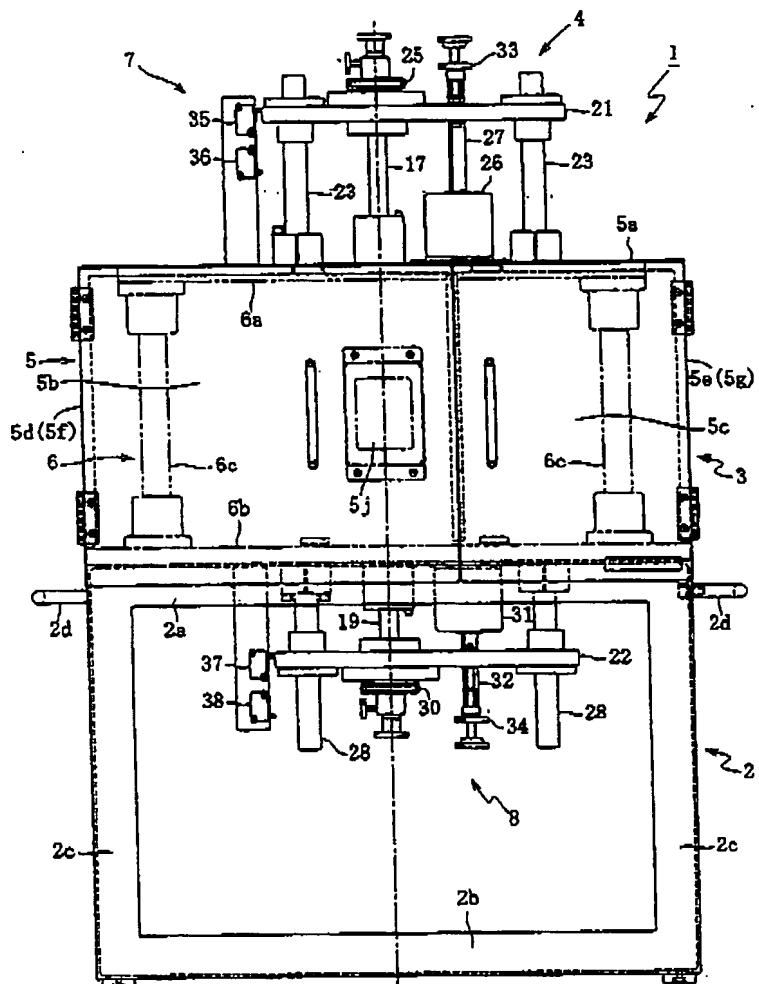
Lamp rating	350	450	550	650	750	850	950
Lamp total power	700	900	1100	1300	1500	1700	1900
Filament width	4.3	5.5	6.8	8	9.2	10.5	11.7
Filament length	10.5	10.5	10.5	10.5	10.5	10.5	10.5
Filament thickness	3	3	3	3	3	3	3
Volume	135.45	173.25	214.2	252	289.8	330.75	368.55
Lamp rating / Volume	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Melt zone power density	2.0	2.3	2.4	2.6	2.7	2.8	2.8
Temperature	1960	2025	2069	2094	2118	2139	2149

FIG.10



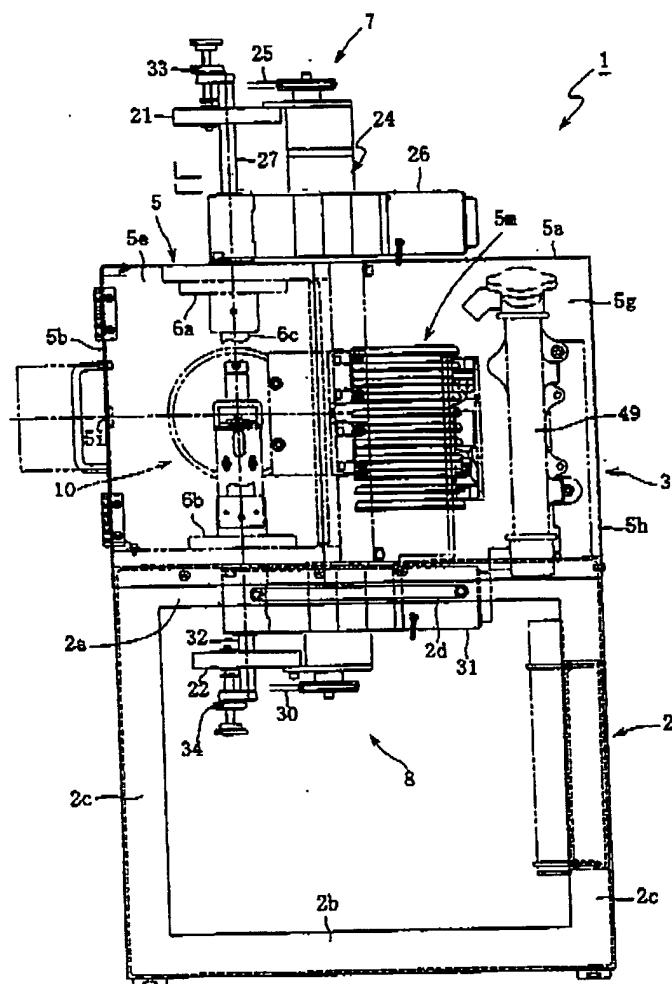
5 / 14

FIG.11-1



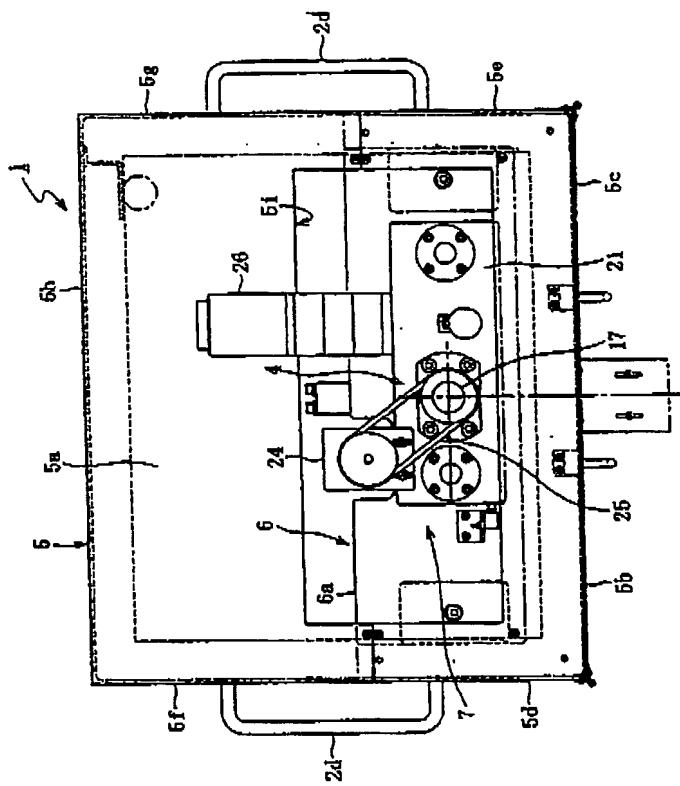
6 / 14

FIG.11-2



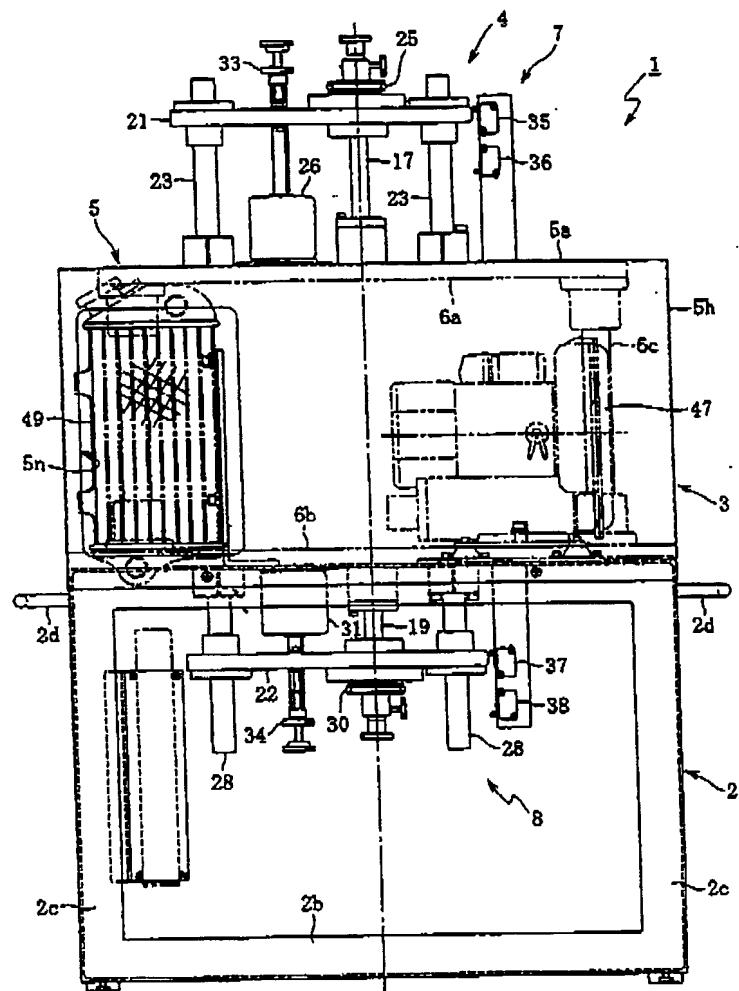
7 / 14

FIG. 11-3



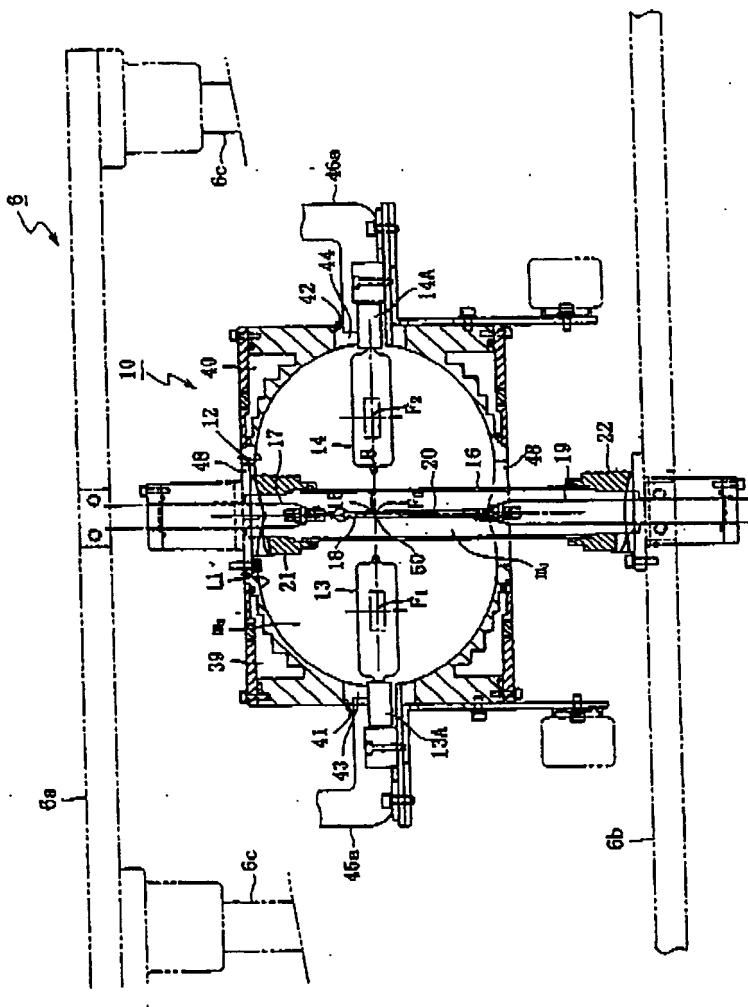
8 / 14

FIG.11-4



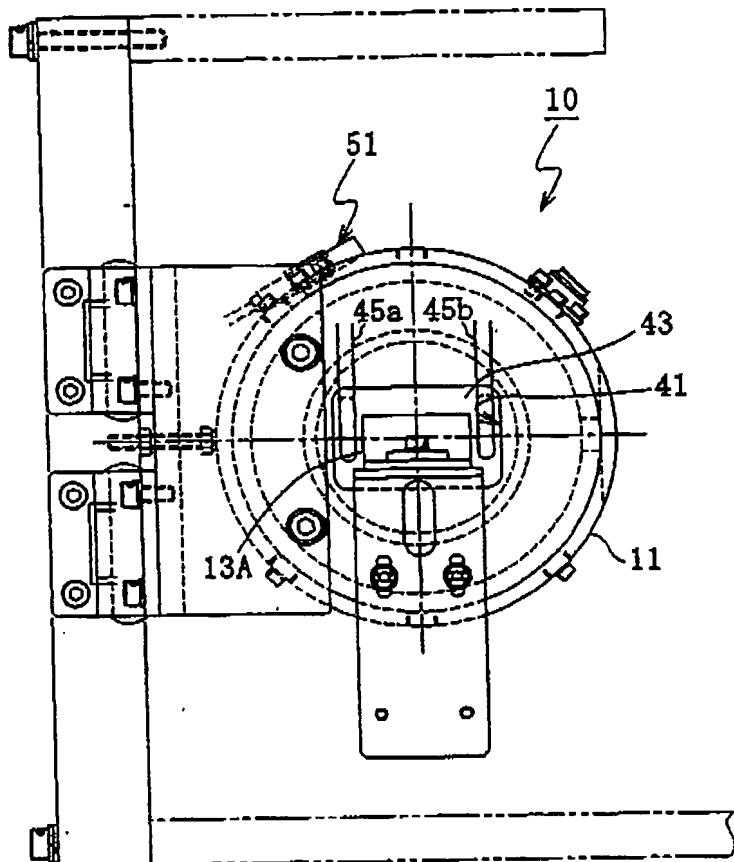
9 / 14

FIG.12-1



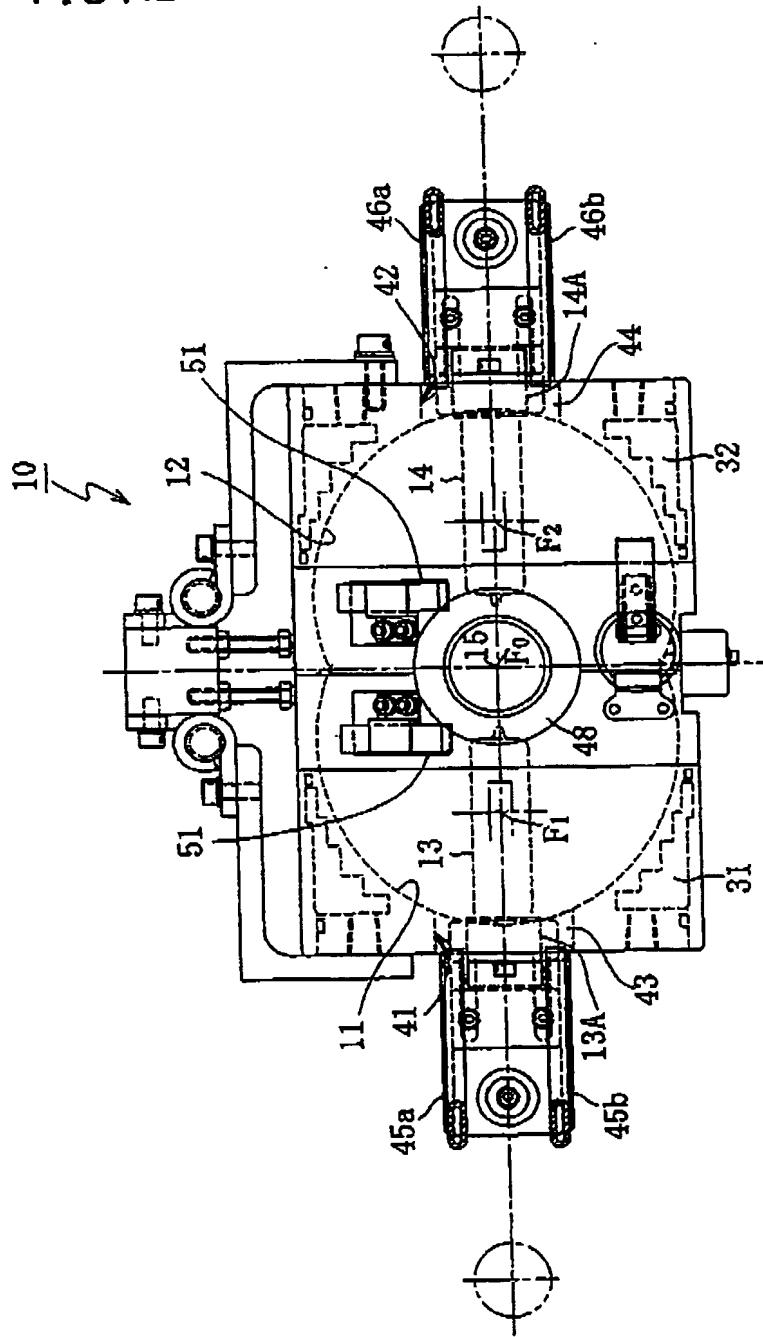
10 / 14

FIG. 12-2



11/14

FIG. 12-3



12 / 14

FIG. 13

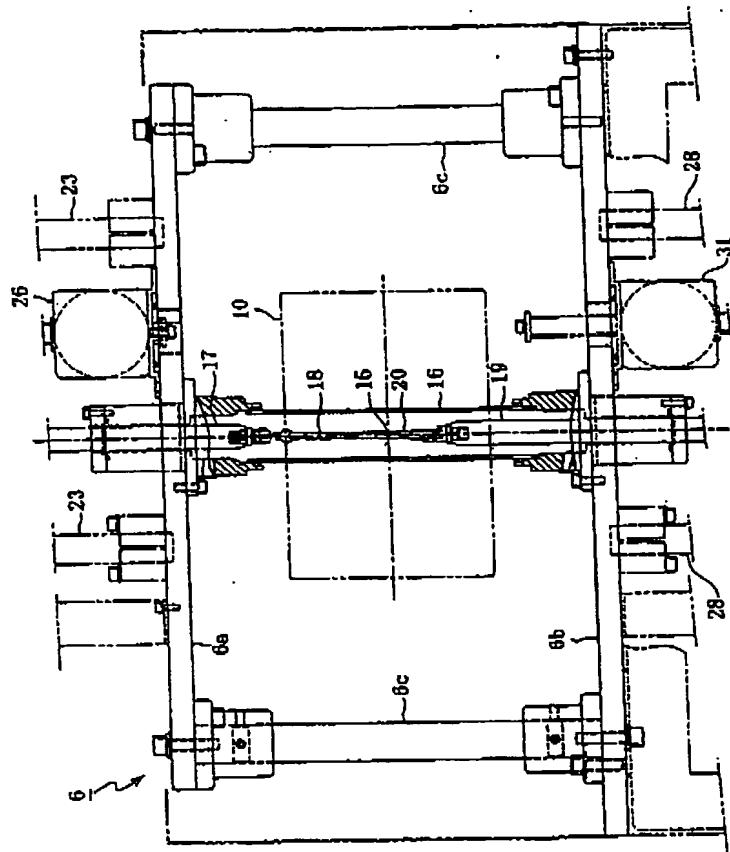
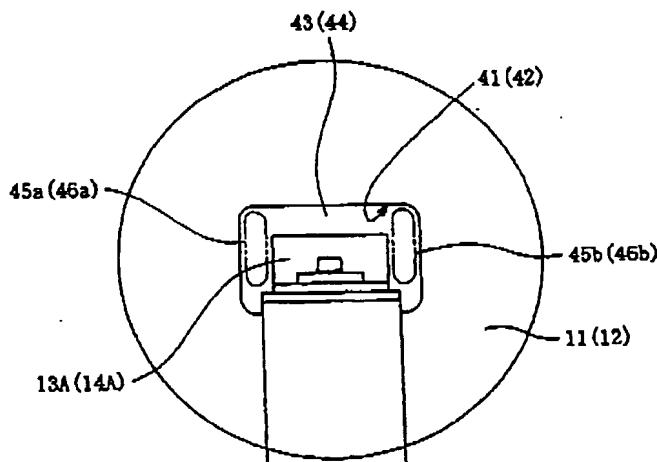


FIG. 14A



13 / 14

FIG.14B

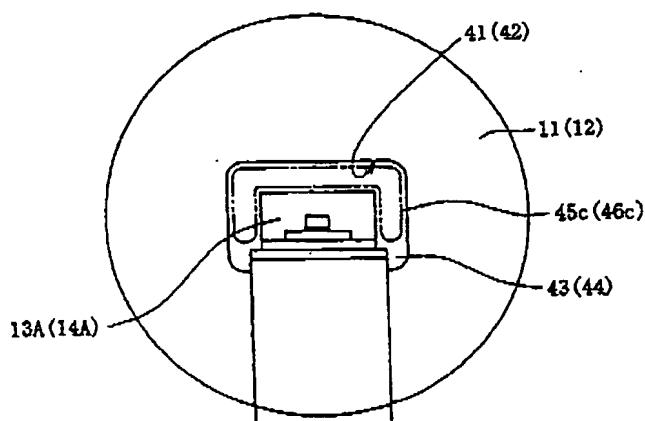
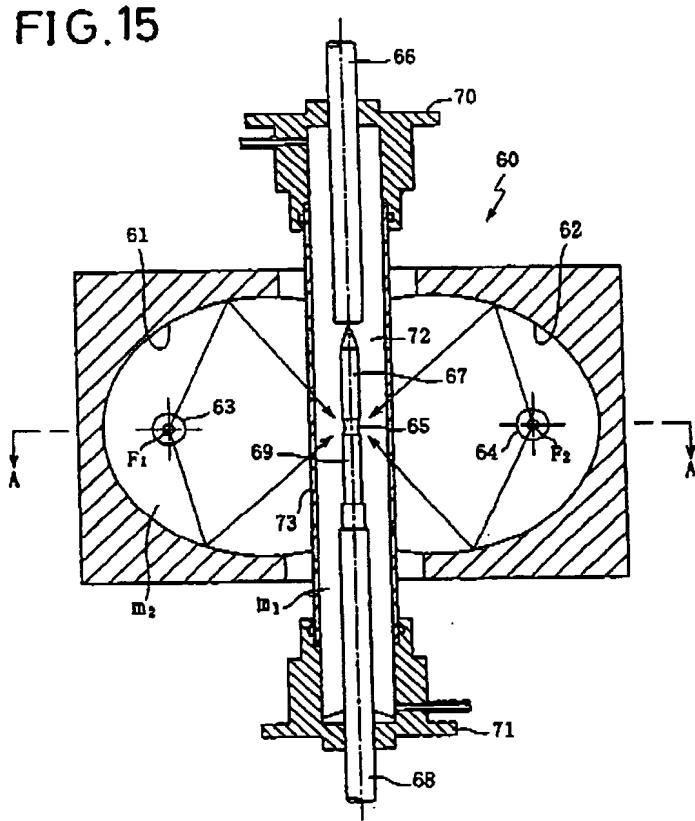


FIG.15



14 / 14

FIG. 16

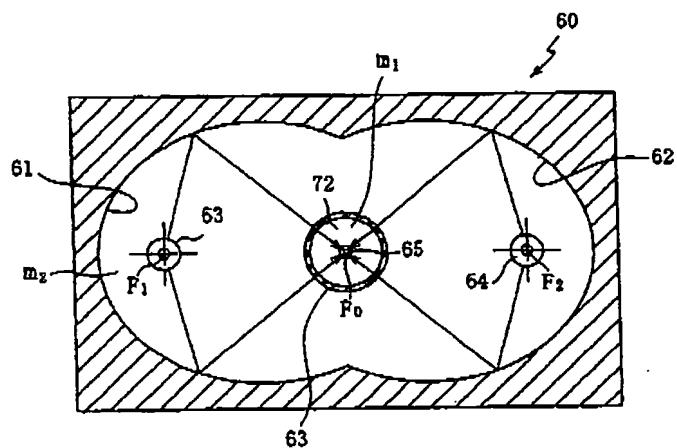


FIG. 17

